

# REPORT ON MACHINERY.

NO. 13434

TUES 11 JUN 1895

Port of Glasgow

Received at London Office \_\_\_\_\_

No. in Survey held at \_\_\_\_\_ Date, first Survey \_\_\_\_\_ Last Survey 18

Reg. Book: \_\_\_\_\_ (Number of Visits \_\_\_\_\_)

on the S.S. Barcelona Supplementary Report I Tons { Gross \_\_\_\_\_ Net \_\_\_\_\_

Master \_\_\_\_\_ Built at \_\_\_\_\_ By whom built \_\_\_\_\_ When built \_\_\_\_\_

Engines made at \_\_\_\_\_ By whom made \_\_\_\_\_ when made \_\_\_\_\_

Boilers made at Glasgow By whom made Amson & Jackson when made 1895

Registered Horse Power \_\_\_\_\_ Owners \_\_\_\_\_ Port belonging to \_\_\_\_\_

Nom. Horse Power as per Section 28 \_\_\_\_\_

**ENGINES, &c.** — Description of Engines \_\_\_\_\_ No. of Cylinders \_\_\_\_\_

Diameter of Cylinders \_\_\_\_\_ Length of Stroke \_\_\_\_\_ Revolutions per minute \_\_\_\_\_ Diameter of Screw shaft \_\_\_\_\_ as per rule \_\_\_\_\_ as fitted \_\_\_\_\_

Diameter of Tunnel shaft \_\_\_\_\_ as per rule \_\_\_\_\_ as fitted \_\_\_\_\_ Diameter of Crank shaft journals \_\_\_\_\_ Diameter of Crank pin \_\_\_\_\_ Size of Crank webs \_\_\_\_\_

Diameter of screw \_\_\_\_\_ Pitch of screw \_\_\_\_\_ No. of blades \_\_\_\_\_ State whether moveable \_\_\_\_\_ Total surface \_\_\_\_\_

No. of Feed pumps \_\_\_\_\_ Diameter of ditto \_\_\_\_\_ Stroke \_\_\_\_\_ Can one be overhauled while the other is at work \_\_\_\_\_

No. of Bilge pumps \_\_\_\_\_ Diameter of ditto \_\_\_\_\_ Stroke \_\_\_\_\_ Can one be overhauled while the other is at work \_\_\_\_\_

No. of Donkey Engines \_\_\_\_\_ Sizes of Pumps \_\_\_\_\_ No. and size of Suctions connected to both Bilge and Donkey pumps \_\_\_\_\_

In Engine Room \_\_\_\_\_ In Holds, &c. \_\_\_\_\_

No. of bilge injections \_\_\_\_\_ sizes \_\_\_\_\_ Connected to condenser, or to circulating pump \_\_\_\_\_ Is a separate donkey suction fitted in Engine room & size \_\_\_\_\_

Are all the bilge suction pipes fitted with roses \_\_\_\_\_ Are the roses in Engine room always accessible \_\_\_\_\_ Are the sluices on Engine room bulkheads always accessible \_\_\_\_\_

Are all connections with the sea direct on the skin of the ship \_\_\_\_\_ Are they Valves or Cocks \_\_\_\_\_

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates \_\_\_\_\_ Are the discharge pipes above or below the deep water line \_\_\_\_\_

Are they each fitted with a discharge valve always accessible on the plating of the vessel \_\_\_\_\_ Are the blow off cocks fitted with a spigot and brass covering plate \_\_\_\_\_

What pipes are carried through the bunkers \_\_\_\_\_ How are they protected \_\_\_\_\_

Are all pipes, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times \_\_\_\_\_

Are the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges \_\_\_\_\_

When were stern tube, propeller, screw shaft, and all connections examined in dry dock \_\_\_\_\_ Is the screw shaft tunnel watertight \_\_\_\_\_

Is it fitted with a watertight door \_\_\_\_\_ worked from \_\_\_\_\_

**BOILERS, &c.** — (Letter for record S) Total Heating Surface of Boilers 2602 sq ft

No. and Description of Boilers One Cylindrical return tubular Working Pressure 160 lbs Tested by hydraulic pressure to 320 lbs

Date of test 30.4.95 Can each boiler be worked separately yes Area of fire grate in each boiler 62 sq ft No. and Description of safety valves to each boiler two spring loaded Area of each valve 8.29 Pressure to which they are adjusted 165 lbs Are they fitted with easing gear yes Smallest distance between boilers or uptakes and bunkers or woodwork 24" Mean diameter of boilers 204"

Length 11' 0" Material of shell plates Steel Thickness 1 1/32" Description of riveting: circum. seams lap 2k long. seams 3 butt. 5 k.

Diameter of rivet holes in long. seams 13/8" Pitch of rivets 9 1/2" Lap of plates or width of butt straps 20 1/2"

Per centages of strength of longitudinal joint rivets 87.0 plate 85.5 Working pressure of shell by rules 160 lbs Size of manhole in shell 12 x 16"

Size of compensating ring M. Kule No. and Description of Furnaces in each boiler Three corrugated Material Steel Outside diameter 57"

Length of plain part 6' 11" Thickness of plates crown 1/32" bottom 1/32" Description of longitudinal joint weld No. of strengthening rings carry.

Working pressure of furnace by the rules 160 lbs Combustion chamber plates: Material Steel Thickness: Sides 9/16" Back 9/16" Top 9/16" Bottom 3/32"

Pitch of stays to ditto: Sides 8 x 8 1/4" Back 8 1/4" Top 8 x 9" Bottom 8 x 8 1/4" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 160, 167 lbs

Material of stays Steel Diameter at smallest part 1 1/8" Area supported by each stay 72 sq in. Working pressure by rules 164 lbs End plates in steam space: Material Steel Thickness 1 1/8" Pitch of stays 15 x 18 1/2" How are stays secured 8 nuts Working pressure by rules 164 lbs Material of stays Steel

Diameter at smallest part 6' 33" Area supported by each stay 328 sq in. Working pressure by rules 174 lbs Material of Front plates at bottom Steel

Thickness 7/8" Material of Lower back plate Steel Thickness 3/4" Greatest pitch of stays 15" Working pressure of plate by rules 163 lbs

Diameter of tubes 3 1/2" Pitch of tubes 4 3/4" x 4 1/8" Material of tube plates Steel Thickness: Front 13/16" Back 13/16" Mean pitch of stays 12 1/16"

Pitch across wide water spaces 15" Working pressure by rules 190, 162 lbs Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 8 3/4" x 2 x 1" Length as per rule 36 5/8" Distance apart 9" Number and pitch of Stays in each 3 x 8"

Working pressure by rules 177 lbs Superheater or Steam chest; how connected to boiler None Can the superheater be shut off and the boiler worked separately \_\_\_\_\_

Diameter \_\_\_\_\_ Length \_\_\_\_\_ Thickness of shell plates \_\_\_\_\_ Material \_\_\_\_\_ Description of longitudinal joint \_\_\_\_\_ Diam. of rivet holes \_\_\_\_\_ Pitch of rivets \_\_\_\_\_ Working pressure of shell by rules \_\_\_\_\_ Diameter of flue \_\_\_\_\_ Material of flue plates \_\_\_\_\_ Thickness \_\_\_\_\_

If stiffened with rings \_\_\_\_\_ Distance between rings \_\_\_\_\_ Working pressure by rules \_\_\_\_\_ End plates: Thickness \_\_\_\_\_ How stayed \_\_\_\_\_

Working pressure of end plates \_\_\_\_\_ Area of safety valves to superheater \_\_\_\_\_ Are they fitted with easing gear \_\_\_\_\_

If not, state whether, and when, one will be sent? Is a Report also sent on the Hull of the Ship?

[142.—L.R.F.H.—2,000.—Form No. 8.—6/95.—Copyright Ink.]



